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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,857	11/02/2005	Peter R.H. McConnell	4328/007	1896

22440	7590	06/26/2007
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EXAMINER
NUR, ABDULLAHI

ART UNIT	PAPER NUMBER
2877	

MAIL DATE	DELIVERY MODE
06/26/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/527,857	Applicant(s) MCCONNELL ET AL.	
	Examiner Abdullahi Nur	Art Unit 2877	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11/02/2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Strobl et al. (US Patent # 5,303,026) [hereinafter Strobl].

As to claims 1, 6 and 7, Strobl teaches an optical system for detecting one or more optical responses of biological tissue, said optical system comprising: (a) a photonic energy source 10 for emitting electromagnetic radiation; (b) an optical emission processing means for receiving the electromagnetic radiation from the photonic energy source and isolating one or more illumination wavelengths of the electromagnetic radiation, said optical emission processing means encoding the one or more illumination wavelengths using one or more pseudo random code words or linear FM thereby generating an encoded signal, the optical emission processing means transmitting the encoded signal to the biological tissue ( column 3, lines 36-45); (c) an optics assembly providing a means for aligning emitter optics of the optical emission processing means with detector optics of a received light optical processing means (column 5, lines 14-16); (d) a received light optical processing means for collecting and isolating one or more wavelengths of received electromagnetic radiation from the biological tissue created in response to the encoded signal and transmitting the one or

Art Unit: 2877

more wavelengths of received electromagnetic radiation to an optical detector (column 3, lines 56-68); (e) an optical detector 16 for sensing and converting the one or more wavelengths of received electromagnetic radiation into an electrical signal; and (f) digital signal processing means 24 for correlating the electrical signal received from the optical detector with the encoded signal thereby identifying an optical response of the biological tissue to the one or more illumination wavelengths, said digital signal processing means controlling the functionality of the photonic energy source, the optical emission processing means and the received light optical processing means (column 5, lines 14-41).

As to claim 2, Strobl teaches all as applied to claim 1, and in addition teaches a system for detecting optical characteristics of biological tissue wherein the digital signal processing means is a circuit board which is integrated into a computing system (column 5, lines 35-41).

As to claim 3, Strobl teaches all as applied to claim 1, and in addition teaches a laser as energy source (column 5, lines 54-60).

As to claim 4, Strobl teaches all as applied to claim 1, and in addition teaches a system for detecting optical characteristics of biological tissue wherein optical emission processing means and the received light optical processing means include one or more optical devices selected from the group comprising condensers, focusing devices, lenses, fibre optics, apertures and monochromators (column 4, line 44; column 6, lines 4-38).

As to claim 5, Strobl teaches all as applied to claim 1, and in addition teaches a system for detecting optical characteristics of biological tissue wherein the optical detector is selected from the group comprising a gallium-arsenide photodiode, a cadmium sulfide photodiode or a silicon avalanche diode (column 6, line 55).

As to claim 8, Strobl teaches all as applied to claim 7, and in addition teaches a method for detecting one or more optical responses of biological tissue according to wherein the pattern is a contour map, and a position on the contour map is represented by an illumination wavelength and a detection wavelength and intensity of the collected reflectance and fluorescence is represented by contours (column 7, line 62 to column 8, line 8).

As to claim 9, Strobl teaches all as applied to claim 7, and in addition teaches a method for detecting one or more optical responses of biological issue wherein the pattern is a comparative pattern between detected optical responses of two biological tissue samples, said comparative pattern identifying optical response differences between the two biological tissue samples (column 8, lines 9-29).

As to claim 10, Strobl teaches all as applied to claim 7, and in addition teaches a method for detecting one or more optical responses of biological tissue wherein the pattern is a three dimensional representation of the collected reflectance and fluorescence (column 8, lines 6-7).

As to claim 11, Strobl teaches all as applied to claim 7, and in addition teaches a method for detecting one or more optical responses of biological tissue and creating a

pattern of the one or more optical responses wherein the optical characteristics of biomarkers within the biological tissue are determined (column 1, lines 26-37).

As to claim 12, Strobl teaches all as applied to claim 7, and in addition teaches a method for detecting one or more optical responses of biological tissue further comprising said statistical significance value representative of a ratio of signal-to-noise determined during detection (column 5, lines 4-14).

As to claim 13, Strobl teaches all as applied to claim 7, and in addition teaches a The method for detecting one or more optical characteristics responses of biological tissue wherein the pattern is a comparative pattern between detected optical responses of an identical location of the biological tissue sample detected at different points in time, said comparative pattern identifying optical response differences of the biological tissue sample over time (column 8, line16-29).

As to claim 14, Strobl teaches all as applied to claim 7, and in addition teaches a method for detecting one or more optical characteristics response of biological tissue wherein the pattern is a comparative pattern between detected optical responses of two or more different locations of the biological tissue sample, said comparative pattern identifying optical response differences of the two or more different locations of the biological tissue sample (column 8, line16-29).

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdullahi Nur whose telephone number is (571) 270-

Art Unit: 2877

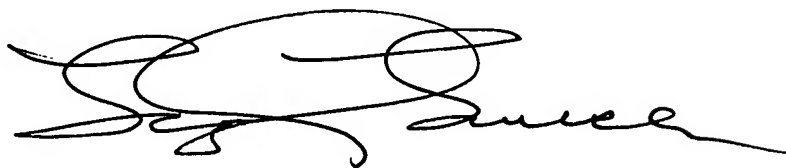
1298. The examiner can normally be reached on Monday - Friday, 8 a.m. to 5p.m.

EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Abdullahi Nur *AN*  
Patent Examiner  
AU 2877

A handwritten signature in black ink, appearing to read 'Layla G. Lauchman', with a stylized, cursive script.

**LAYLA G. LAUCHMAN**  
**PRIMARY EXAMINER**